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Educational Leadership in Enhancing University Performance: Societal Expectations

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Abstract

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This is to be because the university is an important for nation's development. Meeting up to their societal expectations is one of the performance, especially in areas that society does not expect a quality of teaching and contribution to society, for example. However, universities are finding it increasingly difficult to meet these expectations as funds from governments or other sources continue to decrease. Leaders of universities are left to their own devices and creativity to generate more revenue or to channel their limited resources in these areas that society deems important which are dependent on culture and values. This paper will discuss the expectations of several sections of Malaysian society relating to what universities and university leaders should do and what aspects of the

of the efforts used for increasing university performance. However, not many universities are able to keep up with these changes as students, faculty and

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Keywords: University Performance, Educational Leadership Society

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1. Introduction

Globalization and its associated communication together with rapid technological advancement have led to an increase in diversity and societal demand for enhanced performance of universities. The influx of foreign students and teachers which has been well welcomed due to the quality and international reputation it brought in, have contributed to the diversity. Diversity is also encouraged in a university

as it is expected to be facing a different world. The growing need to meet the demand to students and their parents for quality education, efficient management including financial management, research and development, as well as other social issues, is a challenge for universities and need to meet the demand. There is a need for effective leadership and research and



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Abstract

Much is expected from the leadership at a university to ensure high performance in all aspects of tertiary education. This includes teaching, research, publication and service to the society, among others. This is so because it has become increasingly important for universities to prove that they are living up to their societal expectations in terms of their performance, especially in areas that society deems crucial - quality of teaching and contribution to society, for example. However, universities are finding it increasingly difficult to meet these expectations as funds from government or other sources continue to decrease. Leaders at universities are left to their own devices and creativity to generate more revenue or to channel their limited resources to those areas that society deems important which are dependent on culture and other factors. Hence it is crucial for university leadership to know what society's expectations are so that they can channel these limited resources to those areas. This paper will discuss the expectations of several sections of Malaysian society relating to what universities and university leaders should do and what aspects of the universities' performance are valued. Via surveys administered to parents of university undergraduates and postgraduates, employers and lecturers, this study hopes to provide the relevant information to the university leadership relating to society's expectations of key university performance indicators which they use to optimize the usage of the limited resources and tax-payers' money. It is recommended that further investigation are undertaken to provide the leadership with the relevant information to enhance university performance.

Keywords: University Performance Indicators, Educational Leadership, Society

1. Introduction

Globalization and its inherent competition together with recent rapid technological advancement have led to an increase in diversity and societal demands for enhanced performance of universities. The influx of foreign students and lecturers which was very much welcomed due to the revenue and international reputation it brought in, have contributed to the diversity. Diversity is also encouraged as it is also one

of the criteria used for assessing university performance. However, not many universities are able to keep up with these changes as students, faculty and employers and society at large have vastly differing views of what constitutes a 'performing university' or simply 'an effective university'. Some academicians have used the most common ranking agencies such as the Times Higher Education Supplement (THES) and the Shanghai Jiao Tong University Institute of Higher Education as the yardstick to assess university performance and quality while some have disputed these ranking agencies' criteria and say that there should be a more equitable and 'level playing field' system of evaluation for assessing university performance. The aim of this paper is to provide some empirical evidence of the differing views expressed by both academicians, and employers of what constitutes 'performing universities' in this era of globalization and diversity as well as how these criteria can be used by leaders at the universities to assess their own universities to identify areas of strengths and weaknesses so as to enable them to initiate and implement measures to upgrade their performance.

2. Issues faced by leaders of universities with regard to performance and societal expectations

The various agencies dealing with the university ranking have brought to the fore the various conflicting views of what constitutes a world class university and also what factors need to be considered before any form of decision and ranking is undertaken. These ranking agencies have a very significant effect on policies formulated by both government and the university management which may not be entirely congruent with societal expectations.

Hence university administrators are facing a dilemma which can be quite daunting: the growing need to address issues important to students and their parents like quality teaching, efficient management including public funding utilization, cost, access and delivery of student services as well as labor market success or employment upon graduation and need to meet the national standards in a timely fashion (Eckel, 2008).

At the same time there is a need to address the bigger issues relating to research and high

impact publications and also to draw faculty and students from overseas in order to compete with other universities in world ranking where these form the criteria for evaluation (Alden & Lin, 2004, for example). There is also the need to perform and meet the government aspirations of attaining world-class status.

It is also common to find leaders of universities facing the dilemma of having objectives and aims that are at odds with societal expectations (Amaral & Rosa, 2008). The university administrators may insist on autonomy while the government and society tend to pay more emphasis on accountability and improved services such as administration of examinations and the efficient running of the university (Malandra, 2008). Society also tends to expect accountability in terms of the public resources used as well as teaching results.

Another issue is the growing discontent among universities that the same criteria is used to evaluate and assess the performance and quality of all universities. They feel that there should be a level playing field (Drennan & Beck, 2001). Comparing recently established universities with universities that have been around for more than 100 years, is viewed as unfair. Some have suggested that the ranking be based on GDP to reflect university performance more accurately.

University leaders who are pressured to produce results also claim that the university vision and mission should also be taken into account when evaluating their performance. If the universities' main mission is to ensure graduates are employable on graduation which is in line with one of UNESCO's (1997) recommendation, they feel that they should be evaluated on the basis of the number of graduates that are employed on graduation (Kaparou, Kaimakamis, & Panta, 2008). They feel that they should not be assessed on number of high impact research undertaken when most of the resources have been channeled to producing employable graduates. Stemming from this is the dilemma that those criteria deemed crucial for university performance are not the same as those considered important by society. For example, parents want quality teaching and services for their children. However, if universities spend more resources on research and publication, there might be fewer resources for improving teaching and services and this may create society's perception that universities are inefficient (Lewis, 2006).

Based on the above discussion, this paper hopes to address the following research questions:

What are the major categories of university performance leaders should focus on?

What are the major key indicators of each category of university's performances?

Are there discrepancies between the expectations of lecturers, parents and employers in relation to university leadership?

What are the indicators according to academicians, parents and employers that should be used in assessing the performance of university leaders?

3. Methodology

In order to obtain the data necessary for answering the research questions 200 questionnaires were sent to randomly selected employers of graduates in Malaysia and 400 randomly selected academicians and parents of graduate students.

After four weeks, only 11 employers returned completed questionnaires. As for academicians, only 9 were received while for parents of graduate students, only 11 were received.

A second wave of 200 questionnaires were sent out to the same pool of employers and only 10 completed surveys were received. As for parents of graduates, out of 200 questionnaires sent out only 7 were received. Out of 200 questionnaires sent out to the same pool of academicians, only 5 were received.

In total, 53 fully completed questionnaires were used in the data analysis: 21 from employers, 16 for parents of graduates and 16 academicians.

4. Questionnaire

Based on a thorough literature review and interviews with experts, items were constructed and classified under the following 11 categories: 1) Research – 9 items, 2) Publication – 9 items, 3) Quality of Teaching & Program – 15 items, 4) Quality of supervision – 6 items, 5) Facilities & Infrastructure – 8 items, 6) University Administration – 14 items, 7) Lectures – 16 items, 8) Students – 11 items, 9) Contribution to Society & Environment – 8 items, 10) University – Employer / Industry collaboration – 4 items, and 11) Internationalization – 4 items.

The items were 7-point Likert scaled statements requiring respondents to circle their responses ranging from 1 (Not important at all) to 7 (Very Important) in reference to these items as indicators of a world class university.

The following are examples of items in the various categories: 1) Research – Impact of research on society and world, 2) Publications – Number of citations in ISI or internationally refereed journals, 3) Quality of Teaching & Program – Lecturer: student ratio, 4) Quality of supervision – Number of students graduated, 5) Facilities & infrastructure – existence of facilities to attract top scientists and experts, 6) University Administration – Commitment to

recruit only quality lecturers, 7) Lecturers – qualification and experience of lecturers, 8) Students – qualifications of students enrolled. 9) Contribution to society & environment – contribution in solving societal problems, 10) University – employer / Industry collaboration – level of satisfaction in employing the graduates, 11) Internationalization – number of foreign lecturers applying to join the university.

Each category was tested for content validity and internal reliability. Content validity was established by asking three experts in the area of management and teaching at institutions of higher learning to check on

the comprehensiveness of the items in capturing what the category is supposed to capture. Internal reliability of each category was ascertained using Cronbach alphas. Table 1 shows the results of the internal reliability obtained.

Table 1
Internal Reliabilities of the Various Categories

Category	No of Items	Cronbach Alpha
Research	7	.84
Publications	9	.83
Quality of Teaching & Program	15	.93
Quality of Supervision	6	.86
Facilities & Infrastructure	8	.82
University Administration	14	.95
Lecturers	16	.93
Students	11	.85
Contribution to society & Environment	8	.94
University – Employer / Industry collaboration	4	.93
Internationalization	4	.85

It can be seen that all categories have high internal consistency. Hence, the sum of these items in each category provide a reliable measure of the perception in that category.

5. Findings

Table 2 shows the details of the demographic variables involved in this research, namely, gender, type of subjects, education, ethnicity and industry.

Table 2
Descriptive Statistics of the Sample

		Frequency	Percentage
Gender	Male	15	28.3
	Female	38	71.8
Type	Employers	21	39.6
	Academicians	16	30.2
	Parents	16	30.2
Education	Diploma	7	13.5
	Bachelor	22	42.3
	Masters	13	25.0
	Doctoral	7	13.5
	Post Doctoral	3	5.8
Ethnicity	Malay	26	50.0
	Indian	10	19.2
	Chinese	10	19.2
	Others	6	11.6
Industry	Education	17	32.7
	Professional Services	17	32.7
	Finance	11	21.2
	Health	6	11.5
	Others	2	1.9

5.1 Descriptive Statistics

All items in the University Key Performance Indicators Questionnaire (UKPI) were subjected to descriptive statistical analysis. The means indicate that all items within each category are considered as important in evaluating world class universities. This is only to be expected since the items were derived from literature relating to aspects of top performing universities.

The skewness and kurtosis ratios are mostly between -2 and +2 indicating each of the 7-point Likert items appear to be normally distributed and hence may be considered to be representative of the population. This lends itself to parametric data analysis.

The descriptive statistics for each component of the Key Performance Indicators were analyzed and the results are shown in Tables 3 through 13.

Research

The means indicate that all items in the Research category relating to research publications, funding, patents and so forth, were deemed important in evaluating the leaders' performance in top ranking universities. Based on the Means and the SDs, it can be seen that most respondents agreed that the leaders' commitment in devising an efficient system of allocating research funding (item v1.9) is crucial in determining a world class university.

Table 3
Descriptive Statistics of Items in the Research Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v1.1	53	3	7	5.85	1.150	-.718	.327	-.325	.644
v1.2	53	3	7	4.87	1.020	.161	.327	-.430	.644
v1.3	53	3	7	5.02	1.065	.358	.327	-.610	.644
v1.4	53	2	7	4.81	1.287	.085	.327	-.785	.644
v1.5	53	2	7	4.49	1.219	.221	.327	-.168	.644
v1.6	53	3	7	5.79	1.063	-.466	.327	-.566	.644
v1.7	52	3	7	5.63	1.030	-.322	.330	-.522	.650
v1.8	53	3	7	5.57	1.029	-.460	.327	-.068	.644
v1.9	52	4	7	5.65	.861	-.404	.330	-.345	.650

The means (all exceeding 4.49; mid-point being 3.5) indicate that all items in the Research category relating to research publications, funding, patents, and so forth, are deemed important in evaluating leadership's performance in top performing universities. Based on the SDs, it can be seen that most respondents agree that an efficient system of allocating research funding (item v1.9) is crucial in determining a world class university.

The SDs also indicate that the sample differed most on the item v1.4 which is number patents obtained. This indicates that this is among the least important criteria for evaluating a top world university.

Publication

The means in Table 4 indicate that item v2.2 (Number of internationally refereed journal publications) is considered as the most important criteria while item v2.6 (Number of chapters in book) is considered as the least important criteria. The SDs indicate most agree on item v2.2 while the biggest variance or disagreement appears for item v2.8 (Number of articles in newspapers and magazines).

Table 4
Descriptive Statistics of Items in the Publication Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v2.1	52	1	7	5.13	1.456	-.679	.330	.218	.650
v2.2	53	3	7	5.77	1.103	-.601	.327	-.240	.644
v2.3	53	2	7	5.04	1.270	-.307	.327	-.264	.644
v2.4	53	2	7	4.75	1.299	-.179	.327	-.700	.644
v2.5	53	2	7	4.92	1.207	-.396	.327	-.096	.644
v2.6	53	1	7	4.32	1.578	-.251	.327	-.518	.644
v2.7	52	2	7	4.92	1.135	-.262	.330	-.342	.650
v2.8	52	1	7	4.75	1.619	-.787	.330	.108	.650
v2.9	53	1	7	5.13	1.345	-.447	.327	.260	.644

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Quality of Teaching & Program

The 15 items under Quality of Teaching & Program were subjected to descriptive analysis. The means (see Table 5) indicate most of the respondents feel item v3.5 (University produces graduates with the right skills required by industry), item v3.13 (Programs that cultivate critical thinking) and item v3.14 (Programs that produce independent thinkers) are the best indicators of world class universities. The SDs indicate that most agree on items v3.13 and v3.3 (University programs that enhance creativity, innovativeness and problem-solving skills among students). The means also indicate that item v3.15 (University develops its own programs) as the least important aspect to be used in evaluating top universities.

Table 5

Descriptive Statistics of Items in the Quality of Teaching & Program Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v3.1	53	3	7	5.53	1.085	-.075	.327	-.882	.644
v3.2	53	3	7	5.40	1.276	-.221	.327	-1.030	.644
v3.3	53	4	7	6.04	.898	-.573	.327	-.499	.644
v3.4	53	3	7	5.87	1.144	-.933	.327	.306	.644
v3.5	53	3	7	6.11	.954	-1.062	.327	1.022	.644
v3.6	53	2	7	5.53	1.170	-.557	.327	.238	.644
v3.7	52	3	7	5.56	1.178	-.256	.330	-1.177	.650
v3.8	53	3	7	5.70	1.030	-.669	.327	.217	.644
v3.9	53	4	7	5.77	.993	-.379	.327	-.845	.644
v3.10	53	3	7	6.04	1.055	-.995	.327	.269	.644
v3.11	52	1	7	5.44	1.335	-1.442	.330	3.086	.650
v3.12	53	2	7	5.68	1.034	-.829	.327	1.650	.644
v3.13	53	4	7	6.09	.861	-.562	.327	-.519	.644
v3.14	53	4	7	6.09	.946	-.761	.327	-.359	.644
v3.15	53	3	7	5.28	1.116	-.247	.327	-.718	.644

Quality of Supervision

Quality of Supervision was assessed by six items and the data were subjected to descriptive statistical analyses. Table 6 shows the results of these analyses. The means indicate that items v4.5 (Number of internationally refereed papers published under supervisors' guidance), v4.6 (Number of students graduated) and v4.2 (number of masters degree

completed per year) and v4.1 (Number of Masters and Doctoral degrees completed per year) as good indicators of world class universities. Most of the respondents agree that number of internationally refereed papers published under supervisors' guidance (Item v4.5) is the most important criteria for assessing the university performance.

Time taken to complete the doctoral (v4.3) and masters (v4.4) is not considered least important in

assessing performance of the university. The SDs indicate that the respondents tend to differ widely on item v4.3 (Time taken to complete the doctoral program).

Table 6

Descriptive Statistics of Items in the Quality of Supervision Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	
							Std.	Std.
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Error	Error
v4.1	53	2	7	5.34	1.270	-.795	.327	.385
v4.2	53	2	7	5.43	1.152	-.774	.327	.419
v4.3	53	1	7	4.96	1.315	-.561	.327	-.008
v4.4	53	1	7	4.96	1.300	-.582	.327	.122
v4.5	53	3	7	5.49	1.012	-.436	.327	-.578
v4.6	53	3	7	5.47	1.265	-.497	.327	-.718

that this is not considered a very important criteria compared to the others.

Facilities and Infrastructure

Under the Facilities and Infrastructure category, the means and SDs indicate that item v5.5 (Internet access – excellent bandwidth) is the most important criteria for evaluating top universities (see Table 7).

The SDs indicate that most respondents agree with item v5.5 (Internet access – excellent bandwidth) and item v5.2 (excellent facilities to attract top scientists and experts) as very important in evaluating a world class university. The respondents appear to vary most in their views on item v5.3 (Competitive salary to attract top scientists and experts). The mean indicates

Table 7

Descriptive Statistics of Items in the Facilities & Infrastructure Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v5.1	53	3	7	5.21	1.276	-.233	.327	-1.025	.644
v5.2	53	3	7	5.85	.928	-.588	.327	.357	.644
v5.3	53	1	7	5.53	1.436	-1.254	.327	1.424	.644
v5.4	53	2	7	6.15	1.026	-1.644	.327	3.938	.644
v5.5	53	3	7	6.28	.928	-1.507	.327	2.393	.644
v5.6	53	3	7	6.19	.942	-1.255	.327	1.586	.644
v5.7	53	3	7	6.21	.840	-1.224	.327	2.515	.644
v5.8	53	3	7	6.17	.995	-1.451	.327	2.295	.644

University Administration

Of the 14 items under this category, item v6.2 (Leadership shown by university management in recognizing performance and contribution of university lecturers and staff towards university's goals) was rated as as very important (see Table 8). Most of the respondents also feel that this criteria was very important.

The SDs indicate the respondents appear to have the most diverse views on item v6.7 (University management's commitment in taking only quality lecturers) and v6.13 (University management is autonomous – able to make decisions on student enrollment on its own).

Table 8

Descriptive Statistics of Items in the University Administration Category

	Std.								
	N	Minimum	Maximum	Mean	Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v6.1	53	4	7	5.91	.986	-.556	.327	-.661	.644
v6.2	53	4	7	6.02	.971	-.695	.327	-.474	.644
v6.3	53	4	7	6.00	1.019	-.680	.327	-.659	.644
v6.4	53	3	7	5.96	1.091	-1.030	.327	.523	.644
v6.5	52	2	7	5.92	1.152	-1.125	.330	1.218	.650
v6.6	53	3	7	5.81	1.075	-.573	.327	-.497	.644
v6.7	53	2	7	5.40	1.246	-.623	.327	-.177	.644
v6.8	53	3	7	5.81	1.075	-.669	.327	-.376	.644
v6.9	52	4	7	5.87	1.067	-.628	.330	-.793	.650
v6.10	53	4	7	5.91	1.005	-.514	.327	-.805	.644
v6.11	53	3	7	5.85	1.026	-.905	.327	.685	.644
v6.12	53	3	7	5.68	1.070	-.488	.327	-.593	.644
v6.13	53	3	7	5.64	1.226	-.504	.327	-.955	.644
v6.14	53	3	7	5.72	1.099	-.671	.327	-.186	.644

Lecturers

The means in Table 9 indicate that item v7.1 (Qualification of lecturer) was viewed as the most important criteria relating to lecturers that can be used to assess top universities. Most of the respondents also agree that this item is an important criteria for assessing a world class university.

The SDs indicate that most respondents differ on item v7.13 (Number of Nobel Prize winners in the university) – which received one of the lowest means.

Table 9

Descriptive Statistics of Items in the Lecturers Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v7.1	53	4	7	6.40	.743	-1.092	.327	.804	.644
v7.2	52	1	7	5.44	1.335	-1.133	.330	1.641	.650
v7.3	53	2	7	5.38	1.060	-.420	.327	.590	.644
v7.4	53	4	7	6.21	.927	-.735	.327	-.739	.644
v7.5	53	4	7	6.23	.847	-.854	.327	.005	.644
v7.6	53	4	7	5.81	1.128	-.366	.327	-1.285	.644
v7.7	53	3	7	5.49	1.280	-.321	.327	-.948	.644
v7.8	53	3	7	5.53	1.265	-.451	.327	-.829	.644
v7.9	53	3	7	5.19	1.144	.015	.327	-.834	.644
v7.10	53	2	7	4.79	1.419	-.079	.327	-.826	.644
v7.11	53	3	7	5.49	1.265	-.481	.327	-.887	.644
v7.12	53	3	7	5.72	1.306	-.578	.327	-.951	.644
v7.13	52	1	7	4.88	1.722	-.605	.330	-.393	.650
v7.14	53	1	7	4.85	1.622	-.505	.327	-.505	.644
v7.15	52	1	7	5.27	1.470	-1.027	.330	.772	.650
v7.16	53	1	7	4.49	1.804	-.270	.327	-.772	.644

Students

The means indicate that the respondents view the development of independent thinkers (v8.10) as the most important criteria to assessing top universities (Table 10). The SDs indicate that most respondents agree that item v8.10 (Development of independent thinkers) as the most important criteria of a world-class university.

Most of the respondents differ on item v8.9 (Number of international students) as a criteria for assessing top universities.

Table 10

Descriptive Statistics of Items in the Students Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
v8.1	53	3	7	5.53	1.234	-.418	.327	-.685	.644
v8.2	53	2	7	5.68	1.221	-.863	.327	.484	.644
v8.3	53	2	7	5.74	1.195	-1.078	.327	.976	.644
v8.4	53	3	7	5.72	1.166	-.626	.327	-.286	.644
v8.5	53	2	7	4.92	1.426	-.235	.327	-.631	.644
v8.6	53	2	7	5.83	1.051	-1.298	.327	2.716	.644
v8.7	53	3	7	5.81	1.075	-.766	.327	.132	.644
v8.8	53	2	7	5.83	1.205	-1.169	.327	1.188	.644
v8.9	52	1	7	4.50	1.615	-.232	.330	-.645	.650
v8.10	53	4	7	6.06	.864	-.855	.327	.399	.644
v8.11	53	3	7	5.87	1.020	-.630	.327	-.154	.644

Contribution to Society and Environment

Under this category of contribution to society, based on the means, it appears that item v9.7 (University's impact on the community's education) is viewed as most important with the least amount of disagreement (see Table 11). Most respondents also feel that this is an important criteria for assessing university performance.

However, the SDs indicate that item v9.5 (Contribution to the country's economic and political stability - example to avoid another recession or dissatisfaction among citizens) has the most variance. Most of the respondents do not agree on this item.

Table 11

Descriptive Statistics of Items in the Contribution to Society & Environment Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v9.1	53	3	7	5.51	1.067	-.371	.327	-.402	.644
v9.2	53	3	7	5.60	.987	-.363	.327	-.312	.644
v9.3	53	2	7	5.47	1.250	-.671	.327	-.017	.644
v9.4	53	3	7	5.57	1.047	-.182	.327	-.694	.644
v9.5	53	2	7	5.43	1.279	-.650	.327	.074	.644
v9.6	53	2	7	5.72	1.246	-.921	.327	.406	.644
v9.7	53	4	7	5.98	.971	-.486	.327	-.865	.644
v.9.8	53	3	7	5.83	1.156	-.587	.327	-.809	.644

University – Employer / Industry Collaboration

The four items assessing views on university – employer/ industry collaboration were analyzed using descriptive statistics. The means shown in Table 12 indicate that respondents view item v10.2 (Level of satisfaction in employing the graduates) as the most important criteria. The SDs show that most respondents agree that level of satisfaction in employing the graduates is an important measure of top university performance.

The SDs also indicate that most respondents do not agree that item “extent to which university-industry collaboration has driven economic growth” (v10.1) an important criteria for assessing top universities.

Table 12

Descriptive Statistics of Items in the University – Employer / Industry Collaboration Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v10.1	53	2	7	5.51	1.295	-.711	.327	-.243	.644
v10.2	53	3	7	5.74	1.041	-.504	.327	-.417	.644
v10.3	53	4	7	5.68	1.015	-.224	.327	-1.017	.644
v10.4	53	2	7	5.62	1.180	-.743	.327	.385	.644

Internationalization

The means indicate as far as internationalization is concerned, Item 11.3 (Number of international research projects) is the most important criteria for evaluating a world class university (see Table 13). Most of the respondents agree with number of research projects as the most important criteria to assess top universities in terms of internationalization.

The SDs show that most respondents differ widely on their views on Item v11.2 (Number of foreign students applying to join the university).

Table 13

Descriptive Statistics of Items in the Internationalization Category

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
v11.1	53	1	7	4.75	1.413	-.523	.327	-.014	.644
v11.2	53	1	7	4.72	1.524	-.549	.327	-.041	.644
v11.3	53	1	7	5.64	1.317	-1.186	.327	1.814	.644
v11.4	53	1	7	5.00	1.506	-.947	.327	.683	.644

As these categories have been shown to have high internal consistencies (see Table 1), the total scores were obtained to gain a measure of the views of the respondents on these categories. Table 14 shows the descriptive statistics of the scores on the various categories in the University Key Performance Indicators (UPKI) measure.

Table 14

Descriptive Statistics of the UKPI Categories (N = 53)

	Mean per			Std.					
	item	Minimum	Maximum	Mean	Deviation	Skewness	Kurtosis		
		Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Research	5.30	36.00	59.00	47.6981	6.56501	-.013	.327	-.903	.644
Publications	4.97	24.00	59.00	44.7547	8.01418	-.463	.327	.268	.644
Quality of Teaching & Program	3.43	32.00	63.00	51.5094	7.39704	-.460	.327	-.137	.644
Quality of Supervision	5.28	16.00	41.00	31.6604	5.61229	-.547	.327	-.211	.644
Facilities & Infrastructure	5.95	35.00	56.00	47.5849	5.65153	-.493	.327	-.501	.644
University Administration	5.82	56.00	96.00	81.4906	11.68599	-.529	.327	-.799	.644
Lecturers	5.45	62.00	112.00	87.1509	14.19019	.088	.327	-1.079	.644
Students	5.59	44.00	77.00	61.4906	8.31963	-.355	.327	-.279	.644
Contribution to Society & Environment	5.64	31.00	56.00	45.1132	7.67529	-.299	.327	-1.076	.644
University – Employer / Industry Collaboration	5.64	12.00	28.00	22.5472	4.12108	-.615	.327	-.234	.644
Internationalization	5.03	10.00	28.00	20.1132	4.79046	-.391	.327	-.286	.644

The means of all the categories divided by the number of items indicate in general the importance the respondents attach to that criteria as a whole in determining the top performing university. Table 14 shows the importance the respondents attach for each category. The list below shows the order of importance:

- 1) Facilities & Infrastructure
- 2) University Administration
- 3) Contribution to society & environment = University – Employer / Industry Collaboration
- 4) Students
- 5) Lecturers
- 6) Research
- 7) Quality of Supervision
- 8) Internationalization
- 9) Publications
- 10) Quality of Teaching & Program

The list shows that in general the respondents feel the facilities and infrastructure provided by the university should be the most important criteria to use in ranking universities, followed by quality of university administration and its contribution to society and University – Employer / Industry collaboration.

The list also shows that the respondents have generally ranked publications and quality of teaching and program as of the lowest importance in ranking universities, which is quite surprising, since most parents spend their hard-earned money to send their children to universities that have an excellent record in terms of teaching and programs offered.

5.2 Differences in Expectations Between Employers, Parents and Lecturers

In order to ascertain whether there are differences in the expectations between employers of university graduates, parents and lecturers, these three groups were compared on all the 11 categories identified using One-way ANOVA. The scores of the various categories are the dependent variables while the groups form the independent variable in this analysis. If there were significant differences among the groups, the Scheffe tests with Bonferonni correction were undertaken to determine which groups were significantly higher.

Table 15 shows the One-way ANOVA comparison results which indicate no significant differences in the perception of the three groups of society in all categories at $p < .01$ except for the Research, Publications and Lecturers categories.

Scheffe tests with Bonferroni correction showed that for the Research category, the employers obtained significantly higher scores than academicians. This indicates that employers place a significantly higher emphasis on research than academicians when evaluating top world universities.

As for the Publications category, the Scheffe tests with Bonferroni correction indicate that Employers and Parents place a significantly higher emphasis on this aspect than the academicians themselves. Hence, it is important that universities work towards channeling more resources toward publications as this is deemed very important by the two public stakeholders when evaluating top world universities.

Scheffe tests with Bonferroni corrections also showed significant differences among the three groups on the category of Lecturers. Parents place a significantly higher importance on the quality of the lecturers when evaluating universities than the academicians themselves. However, surprisingly, there were no significant differences for the Lecturer category between employers and academicians. This could be due to the perception that quality of lecturers is a given and that it is inherent in any university leadership to ensure this.

Table 15

One-way ANOVA Comparisons of UKPI Categories Among Employers, Parents and Academicians

		Sum of Squares	df	Mean Square	F	Sig.
Research	Between Groups	202.610	2	101.305	2.485	.094
	Within Groups	2038.560	50	40.771		
	Total	2241.170	52			
Publications	Between Groups	776.293	2	388.147	7.571	.001
	Within Groups	2563.518	50	51.270		
	Total	3339.811	52			
QualityTeachProgram	Between Groups	160.105	2	80.053	1.491	.235
	Within Groups	2685.140	50	53.703		
	Total	2845.245	52			
QualitySupervision	Between Groups	91.774	2	45.887	1.484	.237
	Within Groups	1546.113	50	30.922		
	Total	1637.887	52			
FacilitiesInfrastructure	Between Groups	57.788	2	28.894	.901	.413
	Within Groups	1603.080	50	32.062		
	Total	1660.868	52			
UniversityAdm	Between Groups	104.436	2	52.218	.373	.690
	Within Groups	6996.810	50	139.936		
	Total	7101.245	52			
Lecturers	Between Groups	1161.617	2	580.808	3.120	.053
	Within Groups	9309.176	50	186.184		
	Total	10470.792	52			
Students	Between Groups	183.061	2	91.530	1.340	.271
	Within Groups	3416.185	50	68.324		
	Total	3599.245	52			
ContributionSocietyEnviron	Between Groups	84.993	2	42.497	.713	.495
	Within Groups	2978.327	50	59.567		
	Total	3063.321	52			
UniversityIndustryCollaborati on	Between Groups	14.873	2	7.437	.428	.654
	Within Groups	868.259	50	17.365		
	Total	883.132	52			
Internationalization	Between Groups	20.074	2	10.037	.428	.654
	Within Groups	1173.247	50	23.465		
	Total	1193.321	52			

6. Conclusion

This survey research aimed at seeking the views of employers, parents and lecturers on various aspects of the performance of universities. The findings indicate that in terms of research, efficient system of allocating research funding was deemed at very important and the number of patents obtained the least important. The respondents also view number of internationally refereed journal publications as the most important criteria while number of chapters in book is considered as the least important criteria. As for quality of teaching and programs run by university, the respondents feel that the graduates with the right skills required by industry, programs that cultivate critical thinking and programs that produce independent thinkers are most important. As for the quality of supervision, the respondents think that number of internationally refereed papers published under supervisors' guidance, number of students graduated, the number of masters degree completed per year and the number of masters and doctoral degrees completed per year as being crucial in ranking universities. In terms of facilities and infrastructure, the respondents indicate Internet access – excellent bandwidth, excellent facilities to attract top scientists and experts besides and competitive salary to attract top scientists and experts as important criteria in assessing university performance. As for university administration, leadership shown by university management in recognizing performance and contribution of university lecturers and staff towards university's goals was considered important. Under the lecturer category, qualification of lecturers was considered very important. In terms of students, the development of independent thinkers was indicated as most important. Under this category of contribution to society, the university's impact on the community's education was found to be most important. In terms of university – employer/ industry collaboration, the employers' satisfaction in employing the graduates was ranked the highest. As far internationalization, the number of international research projects was ranked as the most important criteria for evaluating a world class university. When the overall means of the 11 categories were ranked, Facilities & Infrastructure was ranked the highest. When the three groups of stakeholders were compared, there were no significant differences in their perception in all categories except for the Research, Publications and Lecturers categories. Hence it appears that ranking should take into consideration the views of significant stakeholders as they appear to differ significantly in some areas. It is recommended that further research be undertaken using a larger sample to shed more light on this issue of key indicators of university performance so that resources are well spent in areas that matter most to the country.

References

- [1] Agasisti, T., & Perez-Esparrells, C. (2010). Comparing efficiency in a cross-country perspective: the case of Italian and Spanish state universities. *Higher Education*, 59, 85-103.
- [2] Alden, J., & G. Lin (2004). *Benchmarking the Characteristics of a World-Class University: Developing an International Strategy at University Level*. London: The UK Higher Education Leadership Foundation. May 2004.
- [3] Amaral, A., & Rosa, M. J. (2008). Balancing the needs and expectations of society with the autonomy of institutions: Supra-national accreditation, trust and institutional autonomy. The IMHE General Conference, Paris, France, 8 – 10 September 2008.
- [4] Drennan, L. T., & Beck, M. (2001). Teaching quality performance indicators: Key influences on UK universities' scores. *Quality Assurance in Education*, 9(2), 92-102. doi:10.1007/s1073-009-9235-8.
- [5] Eckel, P. (2008). Reclaiming public confidence in a competitive environment: The views of U.S. college and university presidents. The IMHE General Conference, Paris, France, 8 – 10 September 2008.
- [6] Kaparou, M., Kaimakamis, G., & Panta, M. (2008). Quality Assurance in the light of the ENQA policy in Greek Technological Educational Institutions (TEI) :Challenges and Prospects. The IMHE General Conference, Paris, France, 8 – 10 September 2008.
- [7] Lewis, H. R. (2006). *Excellence without a soul: How a great university forgot education*. New York, NY: PublicAffairs.
- [8] Malandra, G. (2008). The University of Texas accountability process. The IMHE General Conference, Paris, France, 8 – 10 September 2008.
- [9] Recommendation concerning the Status of Higher-Education Teaching Personnel: (1997). http://portal.unesco.org/en/ev.php-URL_ID=13144&URL_DO=DO_TOPIC&URL_SECTION=201.html.